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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,901	02/22/2007	Arata Tomita	Q94729	5424
23373 7590 10/12/2010 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER				
MAKI, STEVEN D				
ART UNIT		PAPER NUMBER		
1747				
NOTIFICATION DATE		DELIVERY MODE		
10/12/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/577,901

Applicant(s)

TOMITA, ARATA

Examiner

Steven D. Maki

Art Unit

1791

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/CD)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 062810

1) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3) **Claims 1-7 and 9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Japan 714 (JP 2001-219714).**

Japan 714 discloses a pneumatic tire with a tread comprising four zigzag circumferential grooves wherein a cross sectional shape of each of the outer circumferential grooves varies in a stepwise manner along the circumferential direction of the tread. See Figures 1-3, abstract and machine translation.

As to claims 1-7 and 9, the claimed tire is anticipated by Japan 714's tire. The claimed circumferential grooves in claims 1-6 and 9 read on the outer circumferential grooves 6, 7 and the claimed inner grooves in claim 7 reads on the inner circumferential grooves 2, 3. IN ANY EVENT: It would have been obvious to one of ordinary skill in the art to provide the outer circumferential grooves 6, 7 of Japan 714's tire tread such that $S' \geq 0.45 S$ (claim 2) and the predetermined cycle along the circumferential direction is

less than or equal to half of a contact length of the tread (claim 5) since (1) Japan 714 teaches varying the cross section of the outer circumferential grooves in a stepwise manner using angles alpha, beta and gamma such that the cycle length approximately corresponds to the block length (Figures 1-3) to suppress drops in driving force and breaking force depending on wear and to prevent uneven wear and optionally (2) it is taken as well known / conventional in the tire tread art to provide a block of a tire tread such that its length is less than half of the length of the contact length of the tread. As to claim 7, it is noted that a straight line can be drawn through the outer circumferential groove without intersecting the edges.

4) Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 714 (JP 2001-219714) as applied above and further in view of Japan 704 (JP 02-081704) and at least one of Japan 203 (JP 02-212203) and Japan 708 (JP 09-011708).

As to claims 8 and 9, it would have been an obvious alternative to one of ordinary skill in the art to form the outer circumferential grooves of Japan 714's outer circumferential grooves having the varying bottom such that the upper edges are straight along the entire circumferential length of the groove since (1) Japan 714 teaches that the upper edge of the outer circumferential groove can be straight along the entire length of the block while the bottom of the groove varies (Figures 1, 2), (2) Japan 704 teaches that it is known in the tire tread art to form a circumferential groove as either a straight groove (Figure 2a) or a zigzag groove (Figure 2b) and (3) it is known per se in the tire tread as evidenced by at least one of Japan 203 (Figures 1-3) and

Japan 708 (Figures 1-4) to provide circumferential grooves in a tire tread such that the upper edges are straight along the entire circumferential length of the groove while the bottom of the groove varies.

Remarks

5) Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

6) No claim is allowed.

7) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven D. Maki/
Primary Examiner, Art Unit 1791

Steven D. Maki
October 1, 2010